Pyenson Eric J. Form 4 August 21, 2012

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB APPROVAL OMB

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

may continue.

See Instruction

1(b).

1. Name and Address of Reporting Person * Pyenson Eric J.			2. Issuer Name and Ticker or Trading Symbol A123 SYSTEMS, INC. [AONE]	5. Relationship of Reporting Person(s) to Issuer			
(Last)	(First)	(Middle)	3. Date of Earliest Transaction	(Check all applicable)			
(Eust)	(1 1131)	(Middle)	(Month/Day/Year)	Director 10% Owner			
C/O A123 SYSTEMS, INC., 200 WEST STREET			08/20/2012	_X_ Officer (give title Other (specify below)			
				Vice Pres. and General Counsel			
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check			
			Filed(Month/Day/Year)	Applicable Line)			
WALTHAM, MA 02451				_X_ Form filed by One Reporting Person Form filed by More than One Reporting Person			
(City)	(State)	(Zip)					

(City)	(State) (.	Table	I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned						
1.Title of	2. Transaction Date	2A. Deemed	3.	4. Securities Acqu	ired 5. Amount of	6. Ownership	7. Nature of		
Security	(Month/Day/Year)	Execution Date, if	Transactio	on(A) or Disposed of	f Securities	Form: Direct	Indirect		
(Instr. 3)		any	Code	(D)	Beneficially	(D) or	Beneficial		
		(Month/Day/Year)	(Instr. 8)	(Instr. 3, 4 and 5)	Owned	Indirect (I)	Ownership		
					Following	(Instr. 4)	(Instr. 4)		
				(A)	Reported				
				(A) or	Transaction(s)				
			Code V		Price (Instr. 3 and 4)				
Common Stock	08/20/2012		S <u>(1)</u>	2,798 D \$ 0.	.46 147,628 (2)	D			

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transacti Code (Instr. 8)			ate	7. Title Amoun Under	int of lying ities	8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene
	Derivative Security				Securities Acquired			(Instr.	3 and 4)		Owne Follo
					(A) or Disposed						Repo Trans
					of (D) (Instr. 3, 4, and 5)						(Instr
					4, and 3)				Amount		
						Date Exercisable	Expiration Date	Title	or Number of		
				Code V	(A) (D)				Shares		

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Pyenson Eric J. C/O A123 SYSTEMS, INC. 200 WEST STREET WALTHAM, MA 02451

Vice Pres. and General Counsel

Signatures

/s/ Eric J. 08/21/2012 Pyenson

**Signature of Date
Reporting Person

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan.
- (2) Includes 147,628 restricted stock units ("RSUs"). Upon vesting thereof, the Reporting Person is entitled to receive one (1) share of common stock for each one (1) RSU.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

Reporting Owners 2